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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,956	01/09/2001	James D. Cliver	2960	6176

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EXAMINER
KUMAR, PREETI

ART UNIT	PAPER NUMBER
1751	7

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/756,956	CLIVER ET AL.	
	Examiner	Art Unit	
	Preeti Kumar	1751	

-- The MAILING DATE of this communication appears on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42 and 49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42 and 49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-42 are pending.

2. Applicants have failed to affirm the election of Group I made in restriction requirement in the previous office action. Thus, it is construed that the Applicant's elect Group 1, claims 1-42 without traverse. The restriction requirement is made final.

Response to Amendment

3. The rejection of Claim 37 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn in light of applicant's amendment to the claims.

4. The rejection of Claims 1-2, 5-7, 17, 20, 22, 26, 28, 30, 34, and 36-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Crenshaw (US 5,861,044) is withdrawn in light of applicant's amendment to claim 1.

5. The rejection of Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw et al. as applied to claims 1-2, 5-7, 17, 20, 22, 26, 28, 30, 34, and 36-37 above, and further in view of Bouwknegt et al. (US 4,859,207) is withdrawn in light of applicant's amendments.

6. The rejection of Claims 21 and 35 are rejected under 35 U.S.C. 103(a) as unpatentable over Crenshaw as applied to claims 1-2, 5-8, 17, 20, 22, 26, 28, 30, 34, and 36-37 above and further, in view of Hauser et al. (US 5,667,533) is withdrawn in light of applicant's amendments.

7. The rejection of Claims 3,4,6,9,14,16,27,29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw (US 5,861,044) as applied to claims 1-2, 5-8, 17, 20, 22, 26, 28, 30, 34, and 36-37 above and further, in view of Egli et al. (US 3,743,477) is withdrawn in light of applicant's amendments.

8. The rejection of Claims 10-13, 15, 18-19, 23-24, 32-33, and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw as applied to claims 1-9, 14, 16-17, 20, 22, 26-31, 34, and 36-37 above, and further in view of Fadler nee Jack et al. (US 4,023,925) is withdrawn in light of applicant's amendments.

Response to Arguments

9. Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

New Grounds of Rejection

Claim Rejections - 35 USC § 103

10. Claims 1-8, 17, 20, 22, 25-26, 28, 30, 34, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw (US 5,861,044), and further in view of Bouwknegt et al. (US 4,859,207).

Crenshaw teaches a process for manufacturing patterned fabrics comprising the steps of applying chemicals containing a liquid repellent either alone or with other chemicals such as dye to a textile fabric and subsequently finishing said fabric to form a patterned fabric. See abstract. The chemicals include a liquid repellent which can be of literally any type including fluorocarbons, silicones, waxes and so forth. The chemicals may include a colorant such as a dye, sculpturing agents, texturing agents, dye resists

and so forth. See col.2, ln.35-43. In claim 2, Crenshaw specifically teaches two steps in the process for carving areas of a web of textile fabric comprising, step (a) applying a first chemical solution comprising a liquid repellent to a surface of said web of textile fabric; (b) applying a second chemical solution comprising a dye to said surface of said web of textile fabric. See col.8, claim 6. Crenshaw teaches that carving can result in any on of the following characteristics selected from the group including melted fibers, shrunk fibers, displaced fibers, altered sheen, altered fiber tip definition, altered shade, altered color, altered pile direction, and swollen fibers. These characteristics can vary in magnitude according to process conditions used to obtain a multitude of aesthetic effects. See col.4, ln.57-63. Crenshaw teaches various means for applying streams of dye to textile fabrics by selective deflection of dye streams with pressurized gas, or a plurality of streams of atomized droplets of marking materials to produce a pattern on the substrate, such as rotating roll and brush dispersal unit, or any type of known textile dyeing technology can be utilized with any type of textile fabrics in which the face finish can be altered by heat that includes woven, tufted, knitted, nonwoven, or flocked. See col.2, ln. 50-67.

Crenshaw et al. do not specifically teach a process for manufacturing fabric wherein the entire fabric is exposed to dye and wherein the chemical substance comprises a print paste, or an optical brightener as recited by the instant claims.

Bouwknegt et al. teach a process for dyeing textile planar fabrics made from natural or synthetic polyamides with anionic dyes by:

(a) locally applying a resist agent by itself or in conjunction with an anionic dye of fluorescent whitening agent,

(b) subjecting the textiles to a heat treatment, and

(c) carrying out ground dyeing with a dye liquor that contains a further anionic dye, which process comprises using a resist agent. See abstract.

Bouwknegt et al. teach that the formulations for the selective (local) applications of the resist agent alone or in conjunction with the dye or fluorescent whitening agents, as well as the dye liquors for the cross-dyeing, conveniently contain mineral acids, for example sulfuric acid or phosphoric acid, or organic acids such as formic acid, acetic acid, oxalic acid or, preferably, citric acid. See col.6, ln.51-55. Bouwknegt et al. teach that in addition to resist agents, the dyes or fluorescent whitening agents, further assistants conventionally employed in dyeing technology may be concurrently used. Such further assistants are typically dispersants, levelling agents, electrolytes, wetting agents, antifoams, thickeners or wool protecting agents. Bouwknegt et al. teach that the resist print or the selective colouration is effected by conventional printing methods, for example with the aid of drops, printing rollers or by means of screens. This local application can be made on dry or prewetted goods. For the selective coloration it is expedient to use fast dyes such as reactive dyes and/or metal complex dyes. See col.7, ln.1-10.

Specifically regarding the ground dyeing, Bouwknegt et al. teach that the ground dyeing can be carried out by the exhaust process or by impregnation, continuously or semi-continuously, or also by printing. Impregnation can be effected by applying the dye

liquor by, for example, spraying, nip-padding or curtain coating. See col.7, ln.23-28 and example 1, col.8.

Also, Claim 25 had been inadvertently omitted in rejection made in the previous office action. In example 1, Bouwknegt et al. illustrate exposing the entire fabric to an aqueous liquor comprising dye. See step (b).

Hence, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teaching of Crenshaw by exposing the entire fabric to the dye as recited by Bouwknegt et al. with a reasonable expectation of success, because the teachings of Crenshaw in combination with Bouwknegt et al. suggest a process for manufacturing fabric wherein the entire fabric is exposed to dye.

Furthermore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a print paste, or optical brightener in the process taught by Crenshaw, with a reasonable expectation of success, because Bougwknegt et al. teach the utility of aqueous printing pastes and fluorescent whitening agents in the dyeing process and further, Crenshaw teaches various chemical additives in general.

11. Claims 21 and 35 are rejected under 35 U.S.C. 103(a) as unpatentable over Crenshaw and Bouwknegt et al. as applied to claims 1-8, 17, 20, 22, 25-26, 28, 30, 34, and 36-37 above and further, in view of Hauser et al. (US 5,667,533).

Crenshaw and Bouwknegt et al. are relied upon as set forth above. However, Crenshaw and Bouwknegt et al. do not specifically teach a process for manufacturing fabric to form a heather fabric.

Hauser et al. teach textile fabrics and garments having a random, irregular heather-like appearance are produced by impregnating a textile fabric with an aqueous pretreatment composition comprising a fiber reactive cationic compound, aging the impregnated fabric in a moistened state for about 4 to 24 hours to allow the fiber reactive cationic compound to react with the fibers of the fabric, rinsing the fabric to remove unreacted cationic compound, immersing the fabric in an aqueous bath at a pH of less than 7 and gradually introducing dyestuffs to the bath over a period of at least 15 minutes, and fully exhausting the dyestuffs onto the fabric. The process is applicable for dyeing either piece goods or garments. See abstract. Hauser et al. teach that the heather look is achieved by cross dyeing, for example, by blending two or more different kinds of fibers which receive dye differently. For example, natural or cellulosic fibers may be blended with synthetic fibers and cross dyed with different classes of dyestuffs to achieve the heather look. See col.1, ln.15-35.

It would have been obvious for one of ordinary skill in the art at the time the invention was made to use two types of fibers to form a heather fabric with a reasonable expectation of success, because Hauser et al. teach a method of forming heather fabrics and Crenshaw et al. and Bouwknegt et al. teach a method of manufacturing patterned fabrics with any type of textile fabrics in general.

12. Claims 3,4,6,9,14,16,27,29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw and Bouwknegt et al. as applied to claims 1-8, 17, 20, 22, 25-26, 28, 30, 34,and 36-37 above and further, in view of Egli et al. (US 3,743,477).

Crenshaw and Bouwknegt et al. are relied upon as set forth above.

However, Crenshaw and Bouwknegt et al. do not specifically teach a water soluble chemical substance comprising an alginate print paste, the specified dyestuff, and the other requisite components as recited by the instant claims.

Egli et al. teach a process for the reservation of natural polyamide fibres against anionic dyes and acid dyeable synthetic fibers, which process consists of applying a solution or dispersion of one or more colorless, fibre-reactive compounds to areas of a material that are to be reserved, and fixing the compound prior to coloration of the material. See abstract.

Egli et al. teach that polyamide materials treated with the colourless fibre-reactive compounds can be dyed with anionic dyes; the areas of the material treated with the compounds then remain undyed or are dyed to lighter depth than the remaining material, depending on the degree of reservation imparted by the treatment. The best reserve effects are obtained against anionic dyes bearing two or more sulphonic acid groups; in fact 100 percent reservation of synthetic polyamide fibres can be obtained against this type of dye. A step-by-step decrease in the degree of reservation is obtained with dyes bearing only one sulphonic acid group and with pre-metallized dyes. This process of reservation has no effect on disperse dyes which give the normal effects obtained with this class, whereas basic dyes dye the reserved areas of polyamide material to greater depth than the unreserved substrate. When fibre-reactive compounds containing one or more acid groups are employed for reservation, the material can be subsequently dyed with anionic dyes and then with basic dyes to produce two-colour effects, since the latter class preferentially dyes the areas reserved

against anionic dyes. Egli et al. also teach the reverse procedure wherein the basic dyes being applied first to dye the reserved areas, followed by anionic dyes to fill in the remaining material. Dyes of these two classes can be applied from the same bath if desired. See col.3, ln.20-50.

Specicifically in example 2, Egli et al. teach a printing paste of the following composition: 30 parts sodium alginate thickening, 40 parts sodium bicarbonate, anhydrous, 804 parts water, 6 parts modified sodium alkylsulphate, 30 parts .beta. -naphthoxy-dichlorotriazine dispersed with 90 parts sodium dinaphthylmethane-disulphonate which are applied to a nylon 66 fabric by the Vigoureux process at a coverage of 50 percent and a pressure giving a 100 percent increase over the dry weight on the printed areas. Prior to application the paste is vigorously stirred until of homogeneous consistency. After printing, the fabric is treated in a saturated steam atmosphere for 10 minutes at 105.degree. to fix the impregnation and then rinsed with cold water. The fabric, thus locally preserved against anionic dyes, is cut into five equal parts and these are dyed, respectively, with the following dyes:

1% C.I. 17045 Acid Red 37 (2 sulphonic acid groups),

1% C.I. Acid Red 57 (1 sulphonic acid group),

1.5% C.I. Acid Red 216 (premetallized dye),

1% C.I. Disperse Red 43 (disperse dye),

1% C.I. Basic Red 44 (basic dye).

The length of fabric dyed with C.I. 17045 Acid Red 37 after rinsing and drying, is left practically undyed on the reserved areas. In the piece dyed with C.I. Acid Red 57

the reserved sites are dyed to light depth, and in the piece dyed with C.I. Acid Red 216 to slightly heavier depth. The cutting dyed with C.I. Disperse Red 43 exhibits no depth difference between the reserved and unreserved areas. In that dyed with C.I. Basic Red 44 the reserved areas are dyed to greater depth than the unreserved.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize an alginate print paste and disperse dyes in the process taught by Crenshaw and Bouwknegt et al., with a reasonable expectation of success, because Egli et al. teach the utility of alginate print pastes and disperse dyes in the dyeing process and further, Crenshaw and Bouwknegt et al. teach the utility of various methods of dyeing in general.

13. Claims 10-13, 15, 18-19, 23-24, 32-33, and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crenshaw and Bouwknegt et al. as applied to claims 1-9, 14, 16-17, 20, 22, 25-31, 34, and 36-37 above, and further in view of Fadler nee Jack et al. (US 4,023,925).

Crenshaw and Bouwknegt et al. are relied upon as set forth above. However, Crenshaw and Bouwknegt et al. do not specifically teach a thermosol or pad/steam dyeing process for forming a multicolored fabric, and the other requiste components as recited by the instant claims.

Fadler nee Jack et al. teach a process for obtaining multicolor effects on textiles made of polyester fibers and blends thereof with cellulosic fibers, by locally applying an aqueous solution of alkaline agents, either thickened or not and free from oxidizing or reducing agents, onto a dried or partially dehydrated unfixed pad-dyeing produced on

said fiber material using a disperse dyestuff, allowing the solution to act on the dyeing, thermosoling the material to fix the dyestuff. See abstract.

Fadler nee Jack et al. teach that the printing pastes which contain reducing or oxidizing agents which, in a subsequent thermal process, destroy the bottom dyeing, are applied to pre-dyed material. When the printing paste also contains dyestuffs which are resistant to the discharge agents and are fixable on the fiber, color effects are obtained. In the resist printing method, the fixation of a pre-padded or cross-padded dyestuff is locally prevented by printing resist agents, having a chemical or mechanical action, onto the material. In this case, the color effects are obtained by adding to the printing paste dyestuffs which are fixable even in the presence of a resist agent. Further methods for producing multicolor effects on textiles are a dropwise application of dye liquors, application by means of doctor blades, spraying, foaming and the like, followed by a thermal fixation operation. This type of dyestuff application for obtaining preferably irregular multicolor effects corresponds, on principle, to the direct printing method and is being practiced nowadays especially for dyeing carpets and similar pile-type articles. See col.1, ln.13-34.

Fadler nee Jack et al. teach that reactive dyestuffs may also be added to the alkaline liquors. The padding liquors may likewise contain, in addition to the disperse dyes, reactive dyestuffs. These additives are to be used especially for the dyeing of polyester/cellulosic fiber blends. See col.2, ln.35-40.

Fadler nee Jack et al. illustrate a blended fabric made of polyester fibers and cotton (in a ratio of 67 : 33) was padded at room temperature and a liquor pick-up of

70% (calculated on the weight of the dry material) in a padding machine with an aqueous liquor containing, per liter, 15 g of the disperse dyestuff and 20 g of the reactive dyestuff. The material thus treated was dried at 100.degree. C, and an aqueous liquor containing 6.6 g/l of sodium hydroxide was applied dropwise and irregularly. The material was then thermosoled for 60 seconds at 200.degree. C, rinsed on an open-width washing device and soaped. Circle- and ring-shaped light yellow effects on a red bottom were obtained. See example 1.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a thermosol or pad/steam dyeing process for forming a multicolored fabric in the process taught by Crenshaw and Bouwknegt et al., with a reasonable expectation of success, because Fadler nee Jack et al. illustrate the a thermosol or pad/steam dyeing process for forming a multicolored fabric and further, one skilled in the art would be motivated to combine the teachings of Crenshaw and Bouwknegt et al. with the teachings of Fadler nee Jack et al. to form a multicolored patterned fabric since Crenshaw and Bouwknegt et al. teach the utility of various methods of dyeing in general.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 703-308-4708. The fax phone

numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-872-9309.

Preeti Kumar
Examiner
Art Unit 1751

PK
April 7, 2003

YOGENDRA N. GUPTA
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